

Attorney Docket No. 2102393-991130

TO: **Attn. Examiner Michael J. Stahl**
FAX (571) 273-2360

FR: **David Alberti**

RE: **Application Serial No. 10/033,549 entitled "Optical Spectral Power Monitors Employing Time-Division Multiplexing Detection Schemes"**

Dear Examiner Stahl,

Thank you for taking the time to interview the above-referenced case and providing me with your comments and guidance to help us reach a common ground. Pursuant to our discussion, I am submitting to you some proposed amendments to the independent claims (and related dependent claims) that would more clearly recite the novel feature of the invention that we discussed (i.e., the capability of the apparatus and method to perform both concurrent detection and sequential (e.g., time-division-multiplexed) detection). Once you have had an opportunity to review the proposed amendments, please contact me to discuss how you would like to move the case forward (e.g., by way of Examiner's amendment or by RCE). I can be reached at 1-650-833-2052.

Best regards,

David Alberti

Proposed amendments to claims 1, 18, 29, 31, 32 and 36:

Claim 1 (currently amended)

An optical apparatus, comprising:

- a) an input port, providing a multi-wavelength optical signal;
- b) a wavelength-disperser that separates said multi-wavelength optical signal by wavelength into multiple spectral channels having a predetermined relative arrangement;
- c) an array of beam-manipulating elements positioned to correspond with said spectral channels; and
- d) an array of optical detectors, including a plurality of optical detectors each corresponding to a unique one of said spectral channels;

wherein said beam-manipulating elements are individually controllable, so as to be capable of directing said spectral channels into said array of optical detectors

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concurrently and capable of directing spectral channels into said array of optical detectors
in a time-division-multiplexed sequence.

Claim 18 (currently amended)

An optical apparatus, comprising:

- a) an input port, providing a multi-wavelength optical signal;
- b) a polarization-separating element that decomposes said multi-wavelength optical signal into first and second polarization components;
- c) a polarization-rotating element that rotates a polarization of said second polarization component by approximately 90-degrees;
- d) a wavelength-disperser that separates said first and second polarization components by wavelength respectively into first and second sets of optical beams;
- e) a beam-focuser that focuses first and second sets of optical beams into corresponding focused spots;
- f) an array of beam-manipulating elements positioned to correspond with said first and second sets of optical beams; and
- g) at least one ~~first~~ array of optical detectors for monitoring power associated with said first and second polarization components; and
- ~~h) at least one second optical detector for monitoring power associated with said second polarization component;~~

wherein said beam-manipulating elements are individually controllable, so as to be capable of directing groups of said ~~such that first and second~~ optical beams associated with each wavelength are directed into said at least one ~~first~~ array of optical detectors concurrently and said at least one second optical detector, respectively; and capable of

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directing groups of said optical beams into said at least one array of optical detectors
in a time-division-multiplexed sequence.

Claim 29 (currently amended)

The optical apparatus of claim 18 wherein said at least one ~~first~~ array of optical detectors
~~and said at least one second optical detector each~~ comprises a single array of optical
detectors.

Claim 31 (currently amended)

The ~~spectral monitoring~~ apparatus of claim 18 wherein said at least one ~~first~~ array of
optical detectors ~~and said at least one second optical detector each~~ comprises at least one
element selected from the group consisting of PN photo-detectors, PIN photo detectors,
and avalanche photo detectors.

Claim 32 (currently amended)

A method of spectral power monitoring ~~using a time-division-multiplexed scheme,~~
comprising:

- a) providing a multi-wavelength optical signal;
- b) separating said multi-wavelength optical signal by wavelength into multiple
spectral channels; and
- c) selectively directing said spectral channels into an array of optical detectors, such
that ~~each of groups of~~ said spectral channels is are capable of being received by a
~~unique one of~~ said optical detectors concurrently and groups of said spectral channels
are capable of being received by said optical detectors in a time-division-multiplexed
sequence.

Claim 36 (currently amended)

A method of optical spectral power monitoring, comprising:

- a) providing a multi-wavelength optical signal;

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- b) decomposing said multi-wavelength optical signal into first and second polarization components;
- c) rotating a polarization of said second polarization component by approximately 90-degrees;
- d) separating said first and second polarization components by wavelength respectively into first and second sets of optical beams;
- e) focusing said first and second sets of optical beams into corresponding focused spots;
- f) impinging said first and second sets of optical beams onto an array of beam-manipulating elements; and
- g) individually controlling said beam-manipulating elements, such that ~~said first set~~ groups of said optical beams is are capable of being directed into at least one first array of optical detectors concurrently and groups of said optical beams are capable of being directed into said at least one array of optical detectors in a time-division-multiplexed sequence, whereby said at least one ~~first~~ array of optical detectors monitors power associated with said first and second polarization components, ~~and said second set of optical beams is directed into at least one second optical detector in a time-division-multiplexed sequence, whereby said at least one second optical detector monitors power associated with said second polarization component.~~

DRAFT CLAIMS - DO NOT ENTER

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April 7, 2004

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Commissioner for Patents
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From: David Alberti
Reg. No. 43,465
650-833-2052

Client-Matter Number: 2102393-991130

Re: U.S. Patent Application 10/033,549
"OPTICAL SPECTRAL POWER MONITORS EMPLOYING TIME-DIVISION MULTIPLEXING
DETECTION SCHEMES"

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